

**DATA RELATING TO
MEDICAL RESEARCH PROGRAMS
OF THE FEDERAL GOVERNMENT**

October 1, 1957

**U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
National Institutes of Health**

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PART I
RESEARCH SUPPORT BY THE FEDERAL GOVERNMENT

- . . . Total Federal Research and Development Expenditures**
- . . . Support of Medical Research by Department**

TABLE 1 — Research Expenditures as Part of the Federal Budget, by Broad Function, Fiscal Year 1957

<u>Function</u>	<u>Total Expenditures (in billions)</u>	<u>Research Expenditures (in millions)</u>	<u>Research as Percentage of Total</u>
<u>Total</u>	<u>\$61.4</u>	<u>\$2,979</u>	<u>4.9</u>
National Security	40.9	2,516	6.1
Labor and Welfare	3.0	200	6.7
Social Security, Welfare, & Health	1.9	144	7.6
Agriculture	4.7	103	4.4
Natural Resources	1.3	54	4.2
Commerce and Housing	2.3	92	4.0
All Other Functions	9.2	14	.2

This functional presentation of the Federal budget shows the proportion of expenditures for each function that is devoted to research. The table, it should be noted, does not present data by Department.

The percent of total expenditures for the social security,

welfare, and health functions of the Federal Government (7.6 percent) is the highest percentage of any of the functions listed. In 1954 the equivalent percentage for social security, welfare, and health was 3.8 percent. Therefore, the proportion of research expenditures to total expenditures of this function has doubled.

TABLE 2 — Obligations of the Federal Government for Medical Science Research, Fiscal Years 1953, 1955, and 1957
(millions of dollars)

Department ^{4/}	FY 1953 ^{1/}		FY 1955 ^{2/}		FY 1957 ^{3/}	
	Amount	% of Total	Amount	% of Total	Amount	% of Total
<u>Total</u>	<u>\$83.5</u>	<u>100</u>	<u>\$102.1</u>	<u>100</u>	<u>\$184.8</u>	<u>100</u>
Defense	24.6	29	21.9	21	22.6	12
Army	12.8	15	10.5	10	10	5
Navy	5.9	7	6.3	6	6.9	4
Air Force	5.9	7	5.1	5	5.7	3
✓ Health, Education, & Welfare	44.1	53	63.9	63	139.1	76
<u>Other Offices, Agencies & Establishments</u>						
Atomic Energy Commission	9.8	12	10.8	11	13.1	7
Veterans' Administration	5.0	6	5.5	5	10.0	5

^{1/}Figures drawn from *Federal Funds for Science, III, The Federal Research and Development Budget, Fiscal Years 1953, 1954, and 1955*. National Science Foundation.

^{2/}Figures drawn from *Federal Funds for Science, V, The Federal Research and Development Budget, Fiscal Years 1955, 1956, and 1957*. National Science Foundation.

^{3/}Figures compiled by Office of Research Planning, National Institutes of Health.

^{4/}The Departments of State and Commerce, the Federal Civil Defense Administration, and the Tennessee Valley Authority obligated small amounts for medical science research in these years. The amounts ranged from \$4,000 to \$245,000.

This table summarizes total Federal obligations for medical science research for fiscal years 1953, 1955, and 1957. Medical research funds supplied by the Federal Government have risen from \$83.5 million in FY 1953 to \$184.8 million in FY 1957.

The boundary between research in medicine and biology

is arbitrary. Total Federal obligations for biological research amounted to \$72 million in fiscal year 1957.

Obligations of the Department of Health, Education, and Welfare for medical research have risen from 53 percent to 76 percent of total Federal obligations for medical research. ✓

What are
1953-
1957?
Science
from 1953?

PART II

RESEARCH ACTIVITIES OF THE DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

- . . . Distribution of Research Effort Among the Constituents
- . . . Research Activities of the Public Health Service

TABLE 3 — Total Obligations for Scientific Research and Development (in Millions), Department of Health, Education, and Welfare, Fiscal Years 1954 and 1957

<u>Operating Part of Department</u>	<u>Fiscal Year</u>			
	<u>1954</u>		<u>1957</u>	
	<u>Amount</u>	<u>Percent</u>	<u>Amount</u>	<u>Percent</u>
<u>Total</u>	<u>\$59.7</u>	<u>100</u>	<u>\$143.8</u>	<u>100</u>
Public Health Service	57.2 ✓	97	137.7 ✓	96
Office of Vocational Rehabilitation	<u>1</u> /		2.0	1
Office of Education	.7	1	1.8	1
Food and Drug Administration	.9	1	1.3	1
Social Security Administration	.8	1	1.0	1

¹/\$2,000 in F.Y. 1954.

In terms of dollars, virtually all of the research obligations since 1954 have been those of the Public Health Service.

Most of the rise in total Departmental research obligations from \$59.7 million in fiscal year 1954 to \$143.8 million in 1957 is accounted for by an increase in re-

search obligations of the Public Health Service.

However, the research programs of the Office of Vocational Rehabilitation, the Office of Education, the Food and Drug Administration, and the Social Security Administration have all increased substantially, largely as a result of new research grant programs.

TABLE 4 — Public Health Service Appropriations Used for
Research (in Millions), Fiscal Year 1957
(Training and control functions excluded)

<u>Activity</u>	<u>Research Appropriation 1957</u>	
	<u>Amount</u>	<u>Percent</u>
<u>Total</u>	<u>\$144</u>	<u>100</u>
✓ National Institutes of Health	133	92
Direct Research	35	18
Grants	98✓	74
Bureau of State Services	11	8
Aid to States, General	.6	
Alaska Health Activities	.4	
Venereal Disease Control	.6	
Tuberculosis Control	1.4	
Communicable Diseases	4.3	
Sanitary Engineering	3.3	
Direct Research	2.8	
Grants (Air Pollution)	.5	

Of all research activities of the Public Health Service, 92 percent are conducted by the National Institutes of Health. This is largely a result of the large NIH program of research grants.

However, \$10.5 million (almost 25 percent) of the direct

laboratory operations of the Public Health Service, budgeted at about \$45 million per year, is accounted for by Bureau of State Services laboratories, which are devoted primarily to the solution of practical problems of protecting public health.

PART III

TRENDS IN MEDICAL RESEARCH SUPPORT AT THE NATIONAL INSTITUTES OF HEALTH AND THROUGHOUT THE NATION

- . . . Shift of Emphasis and Growth of NIH
- . . . Growth and Division of National Research Expenditure
- . . . Flow of Medical Research Funds
- . . . What the Federal Agencies Spend and Award

NIH — CHANGE AND EMPHASIS

The medical research effort of this country has shifted in response to the mounting importance of chronic disease, and because broad scientific advances have made areas of study fruitful that were previously barren.

This trend has been reflected in the research patterns at NIH. In 1923 the Public Health Service conducted little research on such problems as cancer, heart disease, or arthritis. Instead, the NIH of that time (known as the Hygienic Laboratory, when PHS was part of the Treasury Department) was staffed largely with microbiologists. There were few scientific leads that made research in chronic diseases attractive, and the relative importance of those diseases was not yet clear.

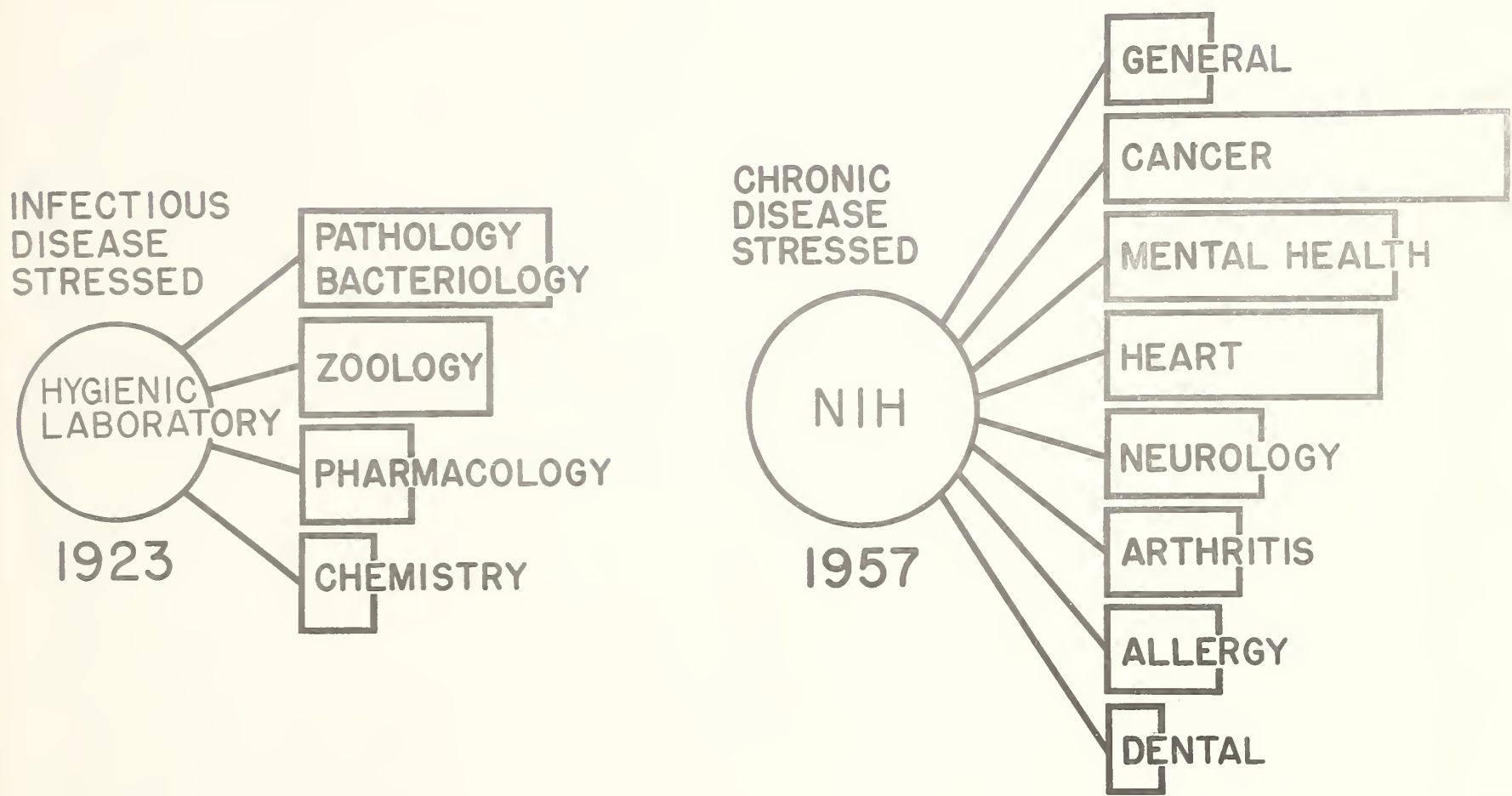
In contrast, the Institutes in 1957 show an emphasis on

the chronic diseases, which are the major health problems today in terms of mortality, disability, and economic burden.

Incidentally, the bars for 1923 and 1957 do not indicate comparability in size of total program. The 1923 budget was about \$400,000; the 1957 budget, roughly 450 times as large.

Here are the seven Institutes: Cancer, Mental Health, Heart, Neurological Diseases and Blindness, Arthritis and Metabolic Diseases, Allergy and Infectious Diseases, and Dental Research. Serving NIH as a whole are the Clinical Center and four Divisions—Research Grants, Biologics Standards, Research Services, and Business Operations. ✓

NIH - CHANGE & EMPHASIS



A DECADE OF MEDICAL RESEARCH — FUNDS TRIPLED

The evolution of NIH should be viewed in light of the research effort of the whole Nation.

The left side of the chart indicates the growth of all research and development in this country, including governmental, university, philanthropic, and industrial. During a ten-year period from 1946 to 1956, the expansion from \$2 billion to \$7 billion was a result of two primary forces—the initiation of extremely expensive military research and development, and a general extension of research effort throughout the economy.

Medical research has expanded at the same rate as the total research and development effort of the Nation. This should be borne in mind when the rapid increase in medical research expenditures is studied out of context. Medical research was about 5 percent of the total research effort at the end of World War II, and remained at 5 percent a decade later.

The decline in purchasing power of the dollar is not

indicated on the chart. The 1957 research dollar is worth only about \$.46 in 1940 dollars.

The right side of the chart shows how medical research expenditures progressed from the total of \$88 million in 1946 to 270 million in 1956.

During this period the funds in support of medical research came from four major sources—endowment, philanthropy, industry, and government. The increase in government support is noteworthy, particularly since the expansion is almost entirely postwar.

The amounts from the three private sources also increased, bearing a fairly constant relation to one another. Total support from government sources equaled that from all other sources in 1956. The net result of Federal spending in the medical research field has been to stimulate rather than replace private effort.

A DECADE OF MEDICAL RESEARCH FUNDS TRIPLED

ALL RESEARCH AND DEVELOPMENT STEPPED UP



\$ MILLIONS



USE OF MEDICAL RESEARCH FUNDS

In this chart the \$270 million expended for medical research throughout the Nation in 1956 is broken down to show where the money comes from and where it is spent. NIH is important in this picture because the funds it administers are such a significant part of the total.

The three private sources of funds—endowment, philanthropy, and industry—account together for \$135 million, or half of the total expenditure.

At the right, we see particularly the importance of schools and other nonprofit institutions (research hospitals, foundation laboratories, etc.) as the major centers of medical research. Industrial laboratories are the sec-

ond largest component, and Federal laboratories the smallest part of the Nation's medical research structure.

The pictured flow of money from the sources at the left to the laboratories at the right is revealing. Schools and other nonprofit institutions depend mainly on three sources of funds—endowment, philanthropy, and Federal research grants. *(most from Federal grants)*

This demonstrates that research in medical schools, universities, and foundations depends on sources of support which they do not control. Funds come for the most part on a year-to-year basis.

USE OF MEDICAL RESEARCH FUNDS

FUNDS

yes?

ENDOWMENT \$ 18

PHILANTHROPY
\$ 32

INDUSTRY
\$ 45

FEDERAL
GOVERNMENT
\$ 135

LABORATORIES

SCHOOLS AND
OTHER NONPROFIT
INSTITUTIONS
\$ 112

INDUSTRY
\$ 93

FEDERAL
GOVERNMENT
\$ 75

1956 TOTAL—\$ 270 MILLION

FEDERAL MEDICAL RESEARCH EXPENDITURES

The total Federal expenditure for medical research in 1957 was approximately \$186 million. To show relative magnitude of operations, this chart represents the distribution of the total over the five agencies in which medical research activities are concentrated.

\$138 million, about three quarters of the total, went to the direct and grant-supported research of the Department of Health, Education, and Welfare. NIH personnel and grantees received by far the largest share, though medical research is also conducted by other Department constituents.

Of the \$138 million, about \$87 million was distributed

through research grants to hospitals, medical schools, and other nonfederal institutions. Funds for research training and other extramural programs of NIH are not represented. Those together with the research grant funds would total more than twice the expenditure for direct operations.

Although most medical research under the armed forces is geared to military needs, a large proportion of the results are ultimately turned to peacetime use. The Atomic Energy Commission is second only to the National Cancer Institute as a Federal investor in cancer research.

FEDERAL MEDICAL RESEARCH EXPENDITURES (MILLIONS) 1957

DHEW

51

67 ✓

\$138 ✓

DEFENSE

14

9

\$ 23

AEC

12

\$ 13

VA

9

\$ 10

NSF

\$ 2

☐ DIRECT OPERATIONS
☐ GRANTS OR CONTRACTS

TOTAL DIRECT OPERATIONS 75
TOTAL GRANTS AND CONTRACTS 111

TOTAL FEDERAL MEDICAL RESEARCH \$ 186

PART IV

RESEARCH PROGRAMS OF THE
NATIONAL INSTITUTES OF HEALTH

- . . . Direct Research and Extramural Programs of NIH
- . . . Structure and Programs of the Several Institutes
- . . . Expansion of Research Grants and Training
- . . . The Granting Mechanism
- . . . Legislative Evolution of NIH Programs

FUNCTIONS OF NIH

✓ Rounded off, the essential facts of the NIH budget for fiscal 1957 are these:

Direct Operations	\$ 49 million
Grant Programs	<u>134 million</u>
TOTAL	\$183 million

"Direct Operations" in this context refers to the funds required to operate the NIH laboratories at Bethesda (including the Clinical Center) and at field stations.

"Grant Programs" refers to three types of support to non-

federal research institutions and individuals: 1) grants for medical research; 2) fellowships and teaching grants for the development of scientific manpower; and 3) grants to States for the control of disease.

The operation of disease control programs is primarily a responsibility of the Bureau of State Services, PHS.

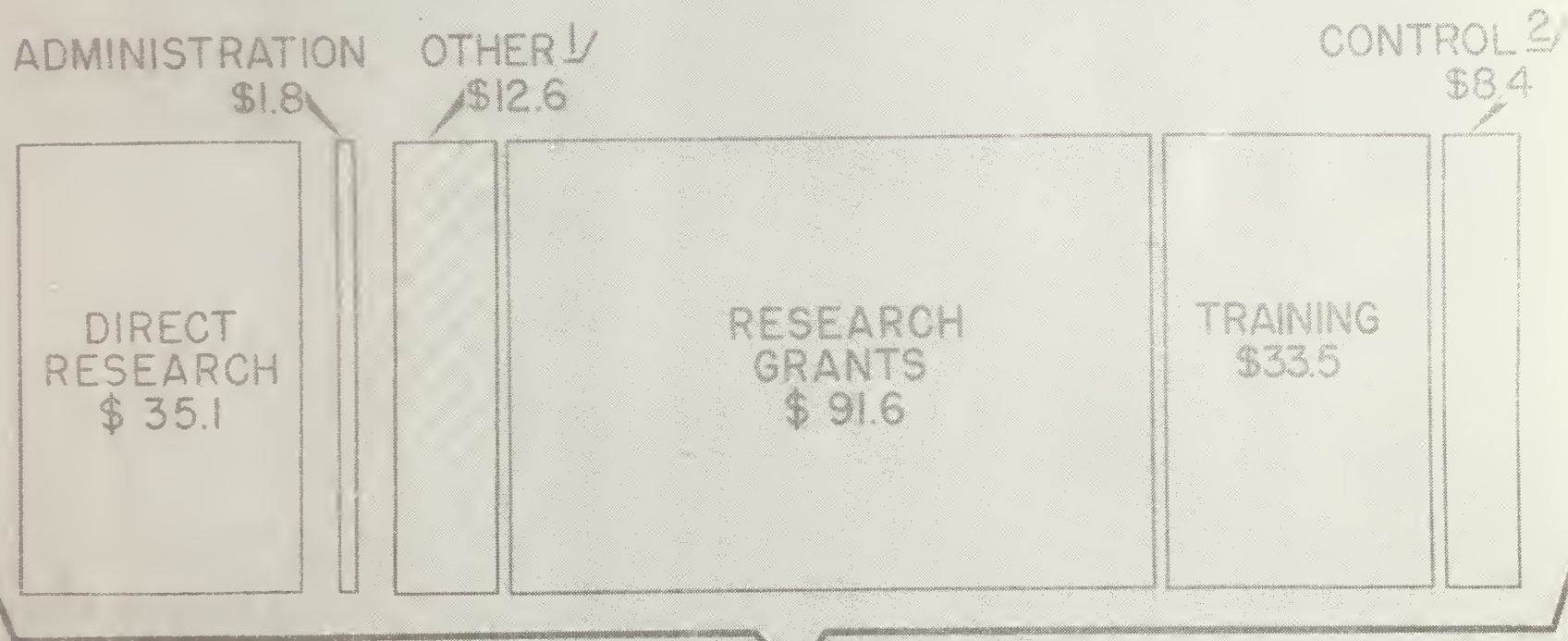
The bars marked "Other" and "Program Administration," though they include the administration of grant programs, are represented for the sake of simplicity as intramural expense.

FUNCTIONS OF NIH

RESEARCH AND RESEARCH TRAINING

DIRECT OPERATIONS

GRANT PROGRAMS



1957 APPROPRIATIONS \$183.0 MILLION

1/ Professional and Technical Assistance \$9.7 Million, Review and Approval of Grants \$2.8

2/ Funds Transferred to Bureau of State Services for Grants to States.

PROGRAMS OF THE SEVEN INSTITUTES

This chart represents the programs of the seven Institutes at NIH.

Each Institute has a laboratory operation at Bethesda and an extramural program. The Clinical Center serves all the Institutes.

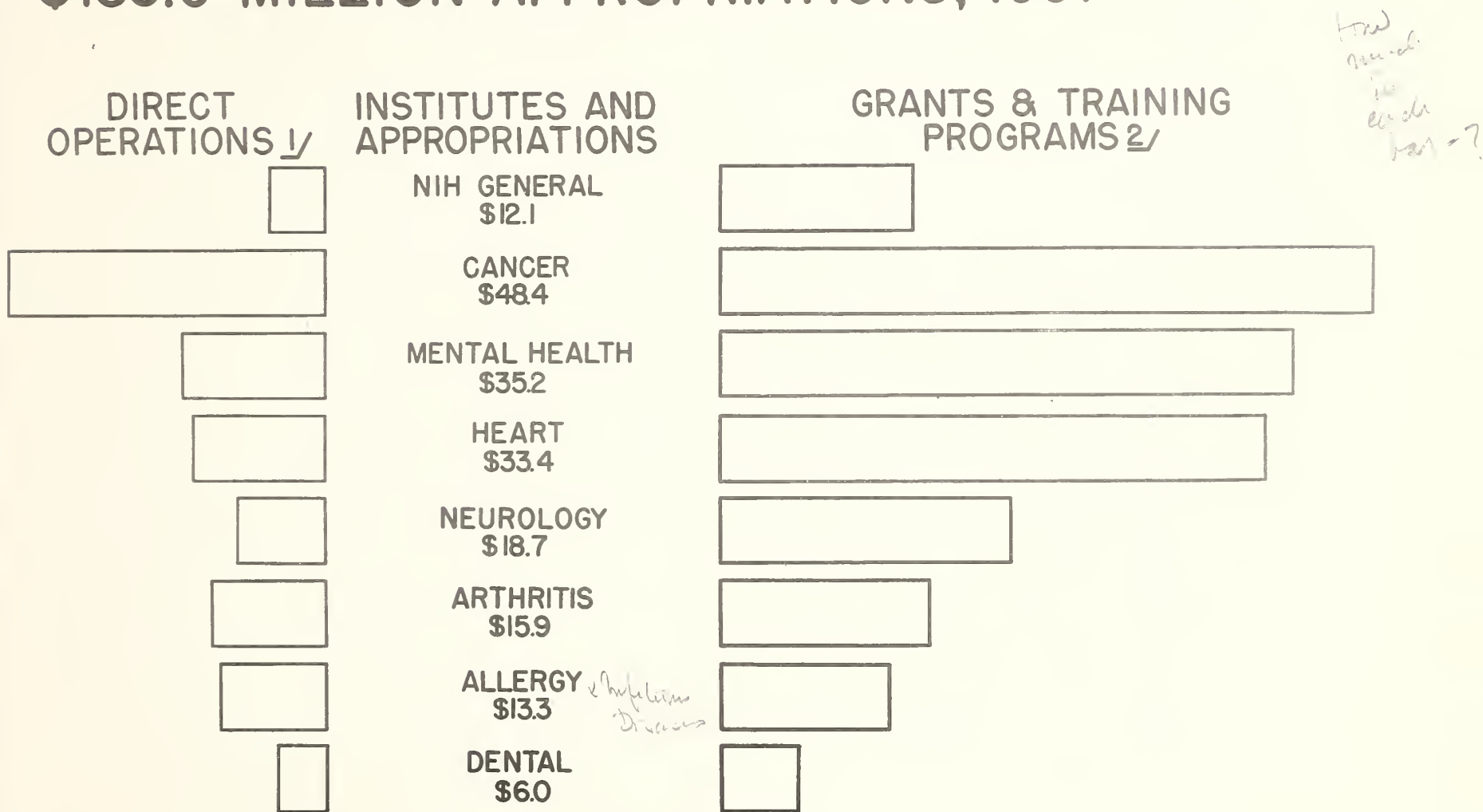
NIH has three relatively large programs—Cancer, Mental Health, and Heart—which account for about two thirds of the total NIH budget. There are three Institutes of moderate size—Neurological Diseases and Blindness, Arthritis and Metabolic Diseases, and Allergy and Infectious

Diseases. Finally, there is one relatively small Institute—the National Institute of Dental Research.

The portion of the chart marked NIH General represents a belief that there must be research in medicine that is not directly related to any specific disease. Grants to support such research are administered by the Division of Research Grants. This bar also includes the funds allocated to the Division of Biologics Standards, organized to ensure the safety, purity, and potency of commercial biologic products.

PROGRAMS OF THE 7 INSTITUTES

\$183.0 MILLION APPROPRIATIONS, 1957



1/ Includes Direct Research, Review and Approval of Grants, Professional and Technical Assistance, Biologics Standards, Dental Resources, and Program Administration.

2/ Includes Research Grants, Fellowships, Training Grants, Field Investigation Grants, and Grants to States.

GRANTS — A GROWING SHARE OF NIH FUNDS

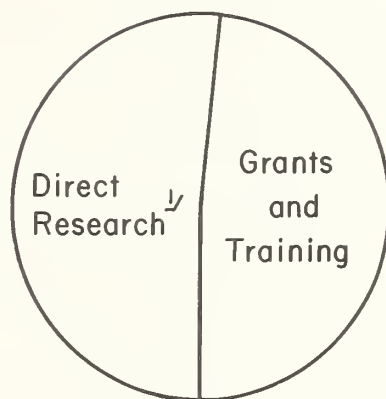
While expenditures for both the direct activities and the research and training grants of NIH have expanded over the past decade, those for the grant programs have expanded most rapidly. As a result, the proportion of the total NIH budget represented by extramural activities has risen from 48 percent in 1947 to 73 percent in 1957.

Since 1952 the training component, though much increased in dollars, has remained a fairly constant percentage of the total expenditure.

Neither grants nor intramural funds for construction of facilities are shown.

GRANTS—A GROWING SHARE OF NIH FUNDS

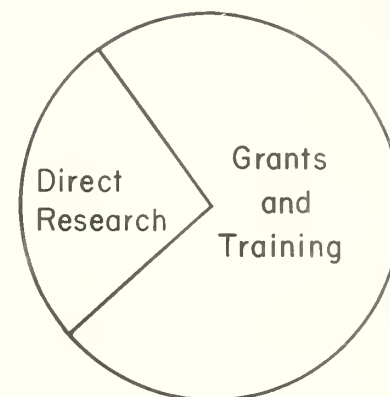
1947



1952



1957



DIRECT RESEARCH	52%	\$ 4.2	33%	\$ 17	27%	\$ 49
RESEARCH GRANTS	44	3.5	34	19	49	90
TRAINING AWARDS	4	.3	17	9	18	34
FIELD INVESTIGATIONS & GRANTS TO STATES	0	.0	16	8	6	10
	<hr/> 100%	<hr/> \$ 8.0	<hr/> 100%	<hr/> \$ 53	<hr/> 100%	<hr/> \$ 183

^{1/2} INCLUDES LABORATORY RESEARCH, REVIEW AND APPROVAL OF GRANTS, PROFESSIONAL AND TECHNICAL ASSISTANCE, AND ADMINISTRATION.

HOW A RESEARCH GRANT IS MADE

The application for an NIH grant for research or training begins with the individual investigator. A basic policy is that grants shall not be directed toward projects of immediate significance to the operations of the Public Health Service, but instead shall support research initiated by the independent investigator.

The scientist's application must be sponsored by his institution. This is a step that the universities and medical schools consider quite important, since administrative decisions must be made as to the space and facilities available.

When a grant application is received by the Division of Research Grants, it is assigned to one of 29 Study Sections. These are composed mainly of scientists from universities and medical schools. They assess the scientific competence of the applicant and the merits of the proposed research.

After the Institutes review their total programs and see how this application fits, the matter is brought before

one of eight National Advisory Councils. These have two functions: 1) they review the actions of the Study Sections in order to make final recommendations to the Surgeon General, and 2) they advise on general policy questions. Lay Council members are particularly valuable in performing the second function.

Following Council recommendations, the Surgeon General approves or disapproves the grants. If the decision is favorable, the Division of Research Grants handles the mechanics of payment. The research institution receives the grant funds and allocates them to the investigator.

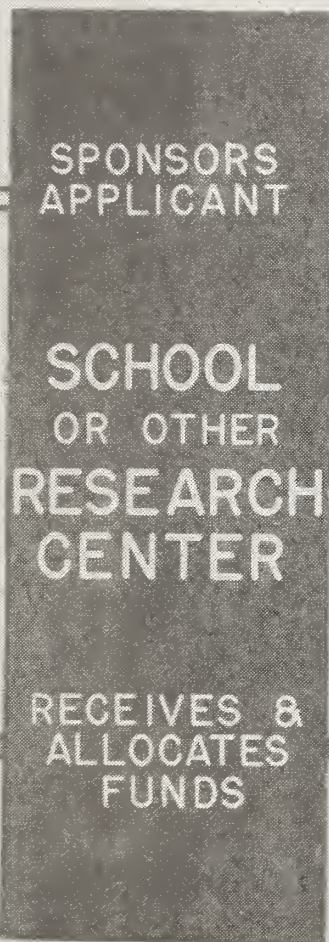
It has seemed advisable on certain occasions to initiate and organize research from a central point. When a new and promising drug, for example, deserves quick and thorough evaluation, a set of standardized clinical trials, centrally planned and involving many research groups, often proves efficient. In this circumstance, the procedure outlined in the chart is not followed.

HOW A RESEARCH GRANT IS MADE

APPLICANT
INITIATES
RESEARCH
IDEA



GRANTEE
CONDUCTS
RESEARCH



DIVISION
OF
RESEARCH
GRANTS

PUBLIC HEALTH SERVICE

SURGEON GENERAL
FINAL ACTION

ADVISORY COUNCIL
RECOMMENDS ACTION

INSTITUTE
PROGRAM EVALUATION

STUDY SECTION
SCIENTIFIC REVIEW

LEGISLATION AND OPERATING FUNDS

This chart shows intramural and extramural appropriations since 1937 and the major legislation related to this growth.

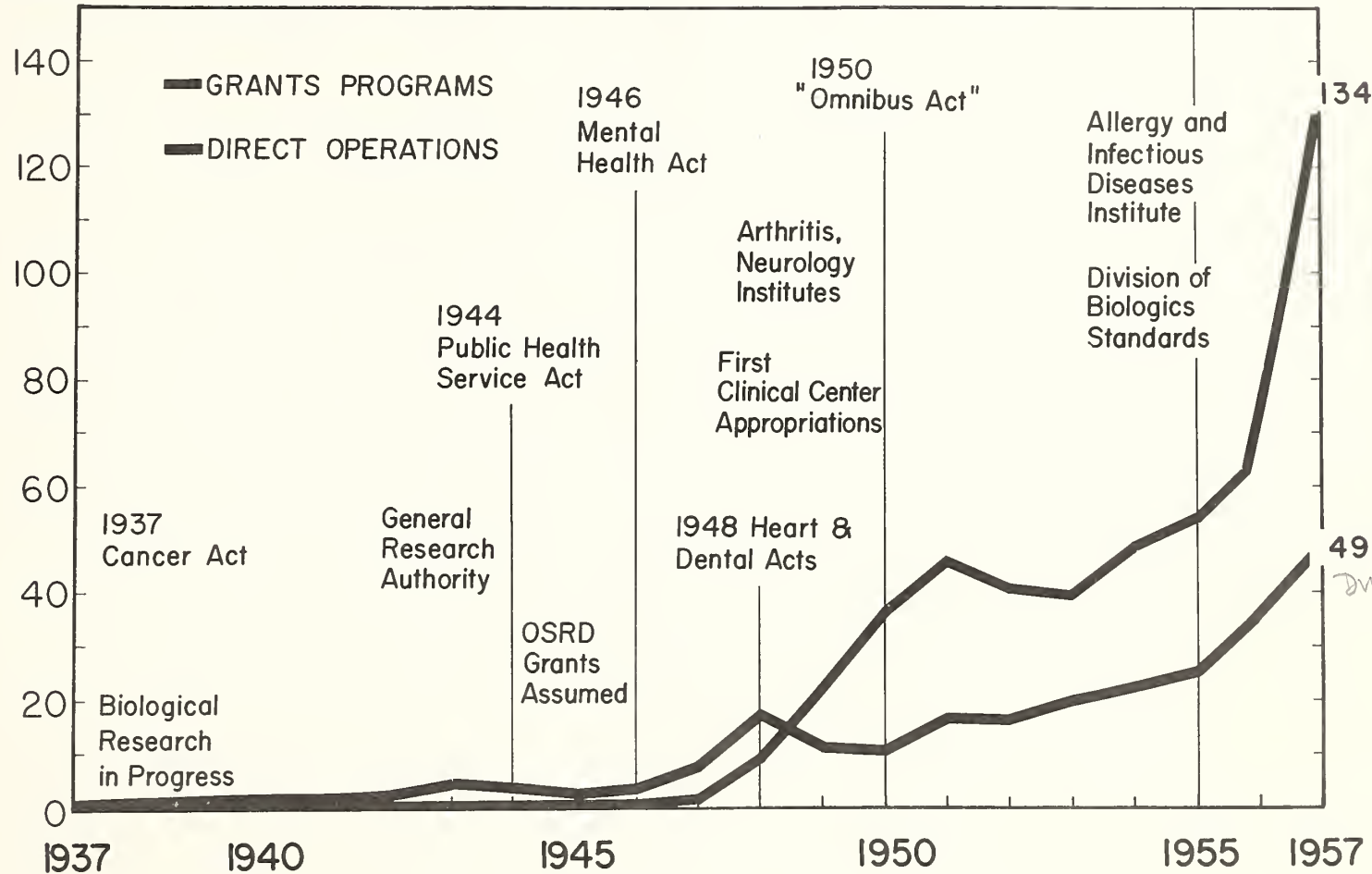
Beginning when the Public Health Service assumed grants formerly administered by the Office of Scientific Research and Development, the growth has been continuous, with the most significant increases found in grants to support research projects and research training.

The chart does not include the funds spent for the Clinical Center building program (1948-1953), which totaled \$64 million—to acquire the land, to plan and construct and equip the building, and to provide for central auxiliary services that could be housed outside the Center and serve all of NIH.

The 'Omnibus Act' of 1950 permits the Surgeon General to establish additional institutes should the need arise.

LEGISLATION & OPERATING FUNDS

MILLIONS OF DOLLARS





PART V
ADMINISTRATION OF THE NATIONAL INSTITUTES OF HEALTH

- . . . Program Direction, Operations, and Supporting Services**
- . . . Distribution of Doctorate Degrees Among the NIH Staff**
- . . . Central Services in Support of Research**

NIH ORGANIZATION

The research function of NIH is carried out by the seven Institutes. Supportive and other operations are provided by five Central Services.

The Division of Research Grants administers a program of noncategorical grants separate from those of the Institutes, and also provides central review and processing for all the grant programs of NIH.

Administrative, technical, custodial, and maintenance services to all programs are furnished by two Divisions—Business Operations and Research Services.

The Clinical Center provides a research patient facility for all the Institutes.

Responsibility for enforcing the Biologics Control Act, as well as conducting research on biologics, is vested in the Division of Biologics Standards.

Top program direction and coordination are provided by the Director of NIH, assisted by two Associate Directors—one for extramural, one for intramural programs—and by three senior staff assistants in the areas of research policy, administration, and information.

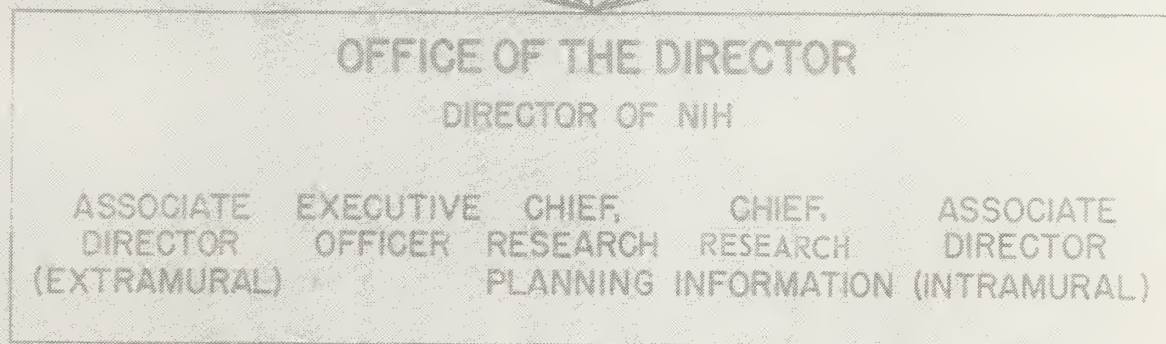
These five, with several staff aids, work with the Institute Directors, Scientific Directors, and others in the Institutes and Divisions to coordinate and evaluate the activities of the research and support programs, and to facilitate communication between those areas.

NIH ORGANIZATION

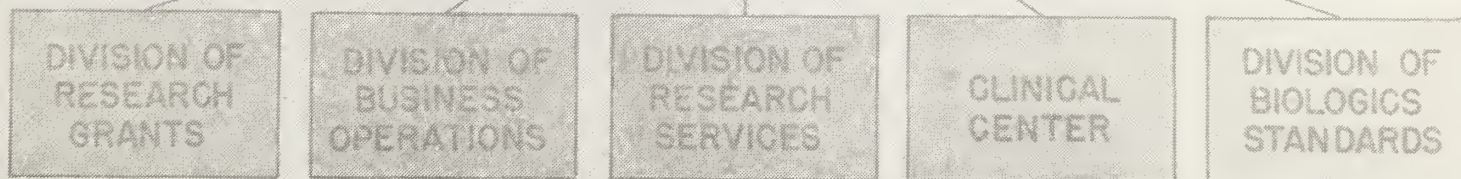
RESEARCH
PROGRAM
OPERATIONS



TOP
PROGRAM
DIRECTION



CENTRAL
SERVICES



PROFESSIONAL STAFF — 1957

This chart deals with direct NIH research activities in the laboratories at Bethesda and elsewhere.

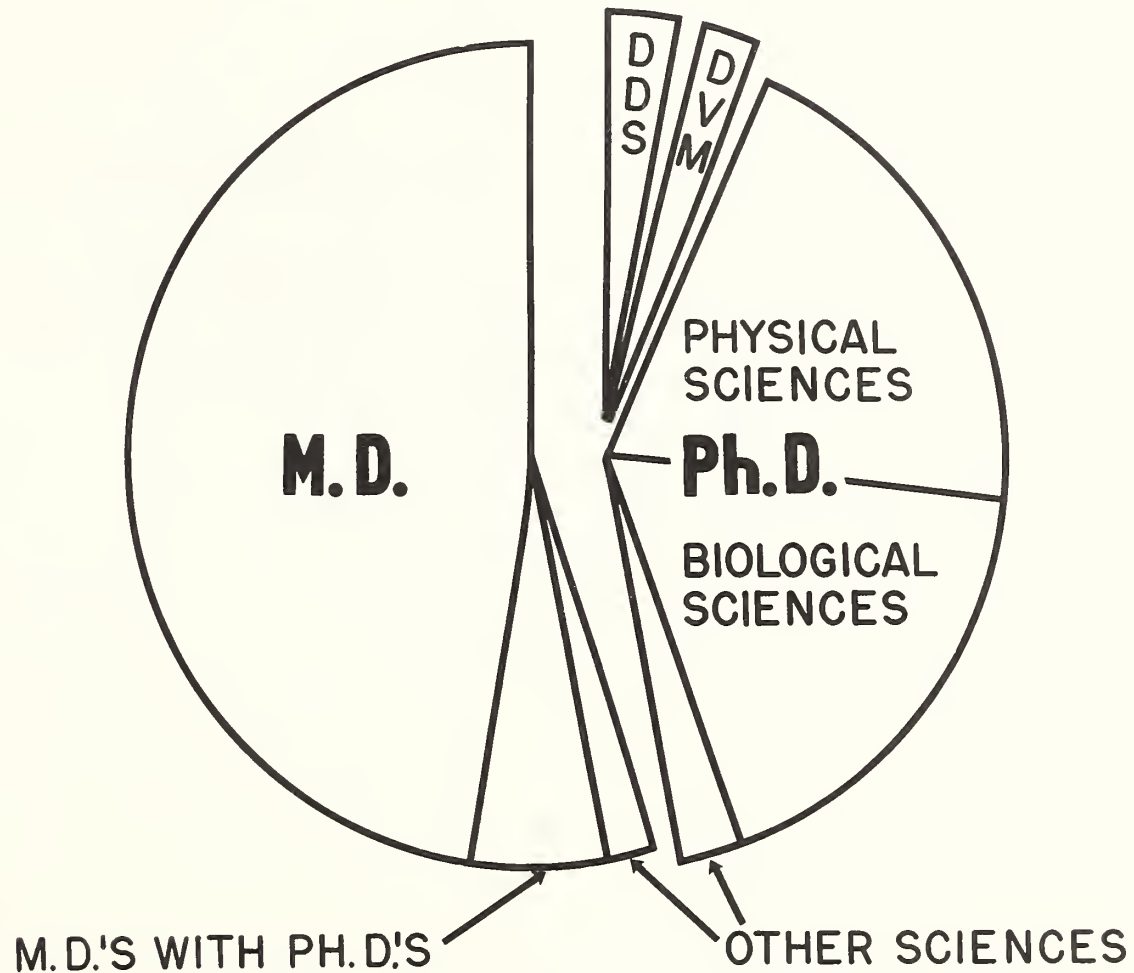
The NIH staff of approximately 7,000 employees includes 942 with doctorates in medicine or science. Nearly half (48 percent) are M.D.'s. There are almost as many Ph.D.'s in the physical and biological sciences (44 percent). In fact, about 7 percent of the physicians also have a Ph.D. or other doctorate in a related science.

The biological fields (biology, bacteriology, physiology, entomology) embrace 16 percent of the staff. The physical science group (19 percent of the total) is largely in chemistry, and especially biochemistry. There are smaller but important groups trained as dentists (D.D.S.), totaling 3 percent; veterinarians (D.V.M.), 3 percent; and social scientists and other Ph.D.'s, 9 percent.

Each of the seven Institutes employs a wide range of medical and scientific specialties in its work.

PROFESSIONAL STAFF—1957

942 PROFESSIONALS WITH DOCTOR DEGREES



NIH CENTRAL SERVICES — 1958 PROGRAM

NIH supports its scientific staff with a wide variety of auxiliary services, most of which are physically removed from the research operations.

The largest of these centralized support areas is the Clinical Center, providing beds and services for the clinical research programs of the Institutes. This is also the newest of the Central Services, having been activated in 1953.

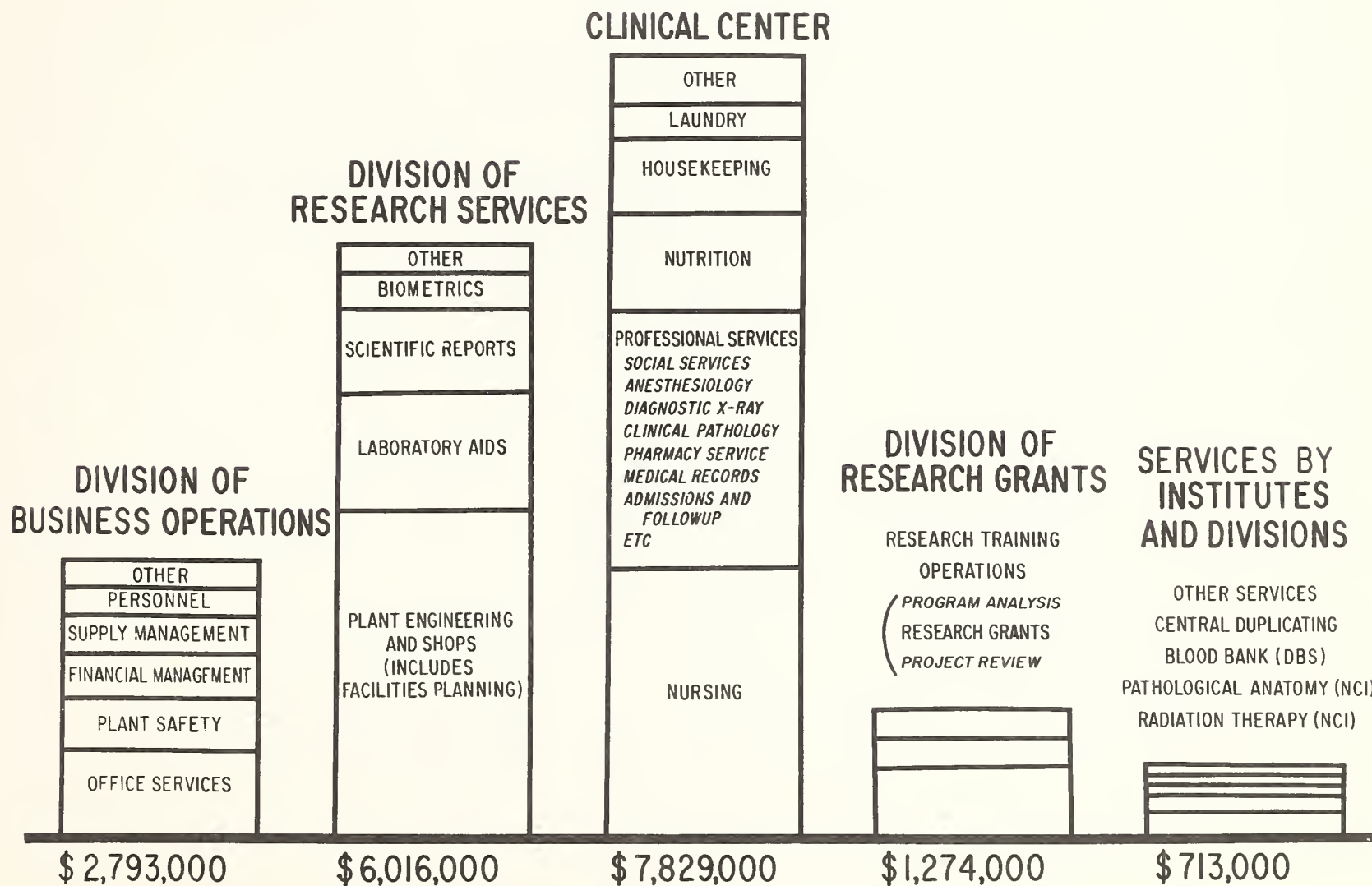
The next largest area, the Division of Research Services, provides support for all scientific and other operations at Bethesda — from maintenance of research equipment to supplying of a wide variety of small animals. Other major activities of DRS are instrumentation, media preparation, tabulating services, and operation of the NIH library.

The next support area, Division of Business Operations, is concerned with financial management, recruitment, supplies and equipment, telephone and transportation facilities, and protective and custodial services.

In addition to these centralized operations, some services are rendered by the program areas, such as radiation service in the National Cancer Institute.

The services mentioned so far support almost entirely the intramural program here at Bethesda. The remaining Central Service, on the other hand — the Division of Research Grants — provides support for the extramural programs of the seven Institutes.

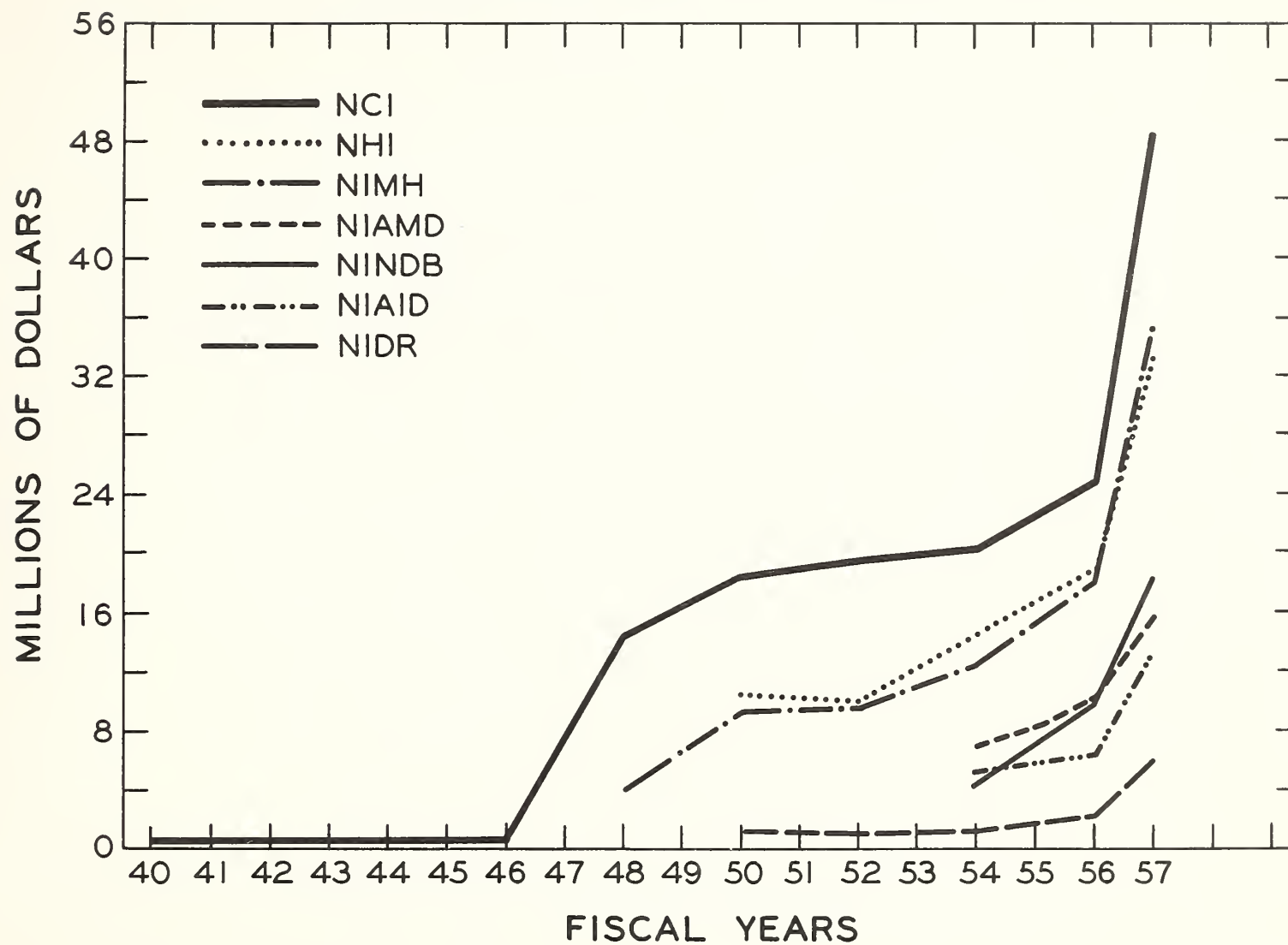
NIH CENTRAL SERVICES-1958 PROGRAM



APPENDIX
BUDGETARY HISTORY OF NIH ACTIVITY

- . . . Appropriations to All the Institutes**
- . . . Appropriation for General Research and Services**
- . . . Appropriations for Each of the Institutes**

APPROPRIATIONS, NIH - 1940-1957



GENERAL RESEARCH AND SERVICES, NIH

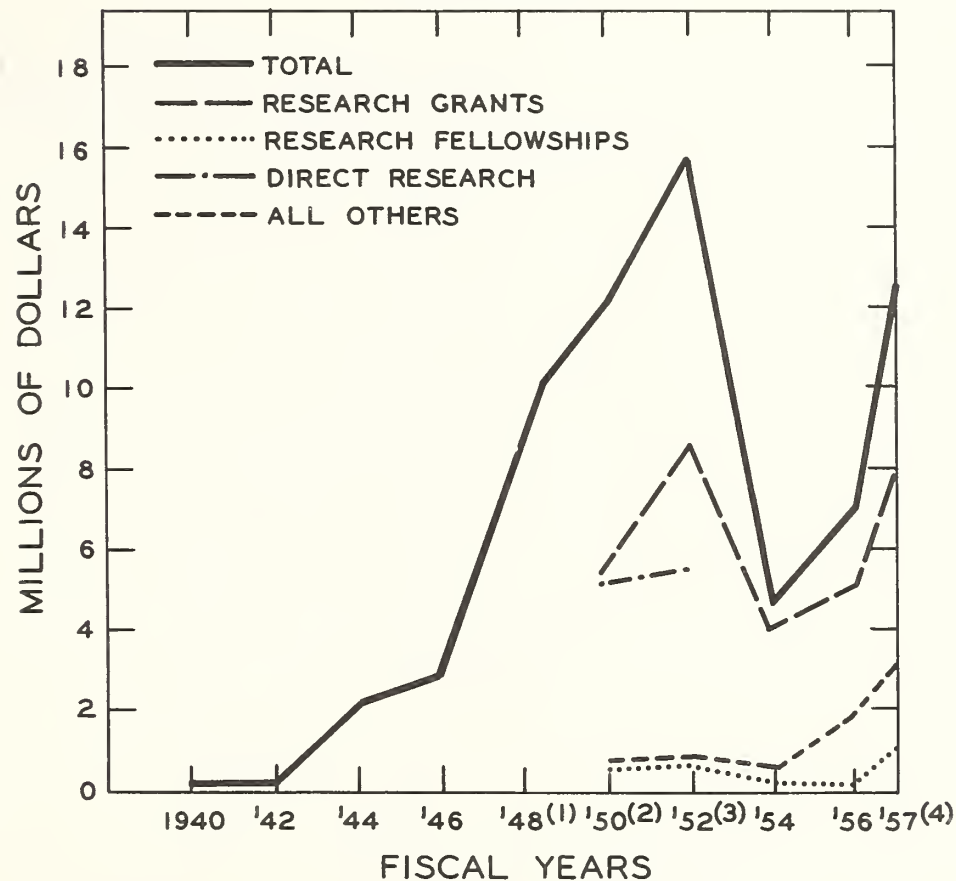
This chart (and those that follow for the seven Institutes) represent a rough presentation of total growth or change in the various programs. These charts reflect activity trends for the period 1950-1957. Prior to 1950, comparable data were not available, since the activity structure varied both within and between Institutes.

For this particular chart (GR & S), the "all others" activity line pertains to the review and approval of grants and fellowships and the Division of Biologics

Standards.

The sharp drop in the total appropriation and activity lines beginning in 1952 does not reflect a decrease in appropriation. Rather, it represents the break-out from the general NIH appropriation of separate categorical programs for the Arthritis, Allergy, and Neurology Institutes. In 1957 the Division of Biologics Standards was transferred to the GR & S appropriation from the Allergy Institute.

GENERAL RESEARCH AND SERVICES (GR & S)



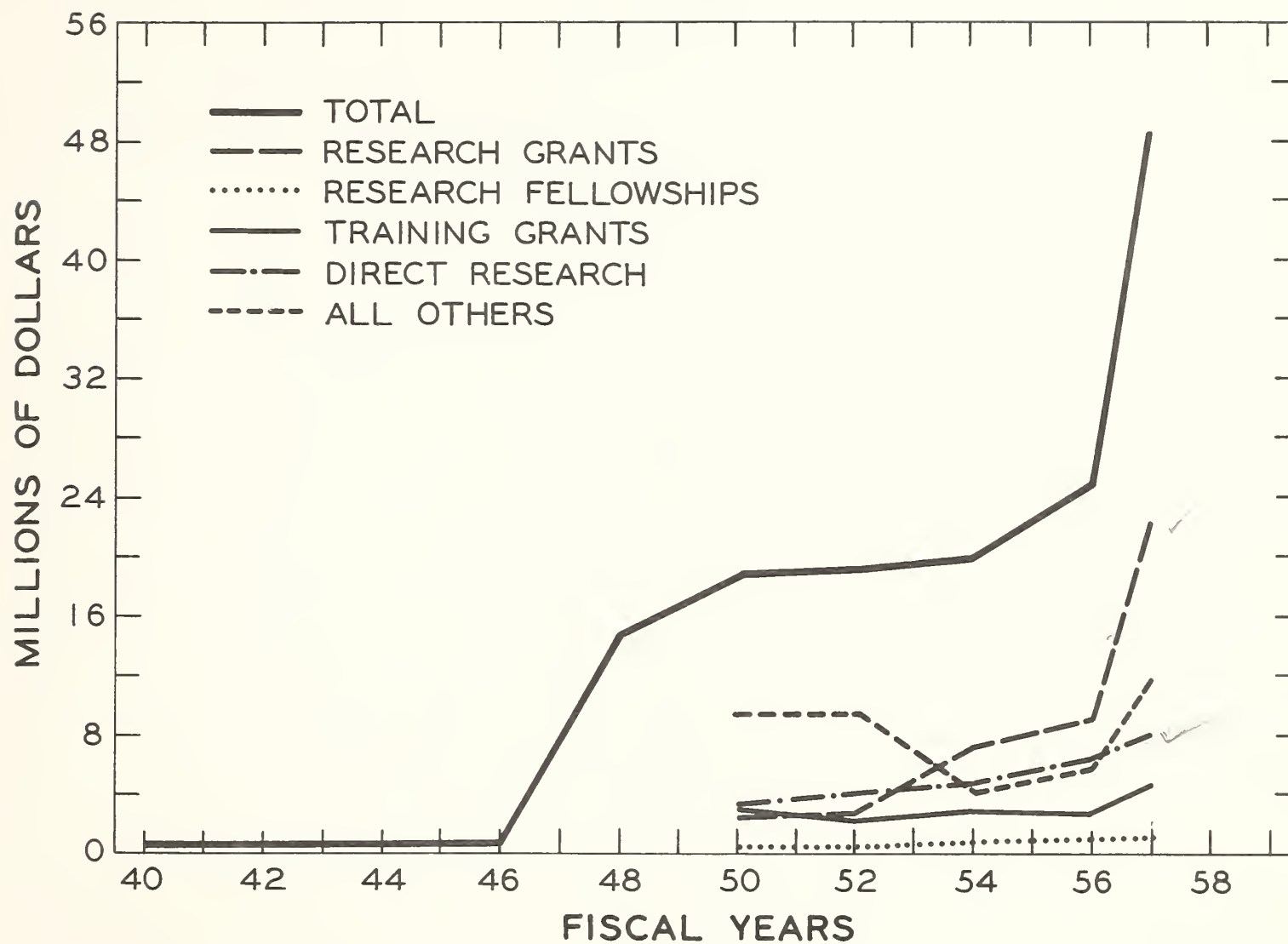
- (1) INCLUDES FUNDS FOR SUPPORT OF RESEARCH ON CAR-DIOVASCULAR DISEASES.
- (2) INCLUDES FUNDS FOR ARTHRITIS AND ALLERGY INSTS.
- (3) INCLUDES FUNDS FOR ARTHRITIS, ALLERGY, AND NEUROL-OGY INSTITUTES.
- (4) INCLUDES FUNDS FOR BIOLOGICS STANDARDS-TRANS-FERRED FROM THE ALLERGY APPROPRIATION IN 1957.

NATIONAL CANCER INSTITUTE

This chart reflects trends in the research and training activities for the period 1950-1957. The activity charted as "all others" includes Administration, Review and Approval of Grants, Technical Assistance to States, Grants to States and Special Central Grants.

The sharp drop in the "all others" line beginning in 1952 is primarily due to termination of the Construction Grants program and a reduction in Grants to States.

NCI

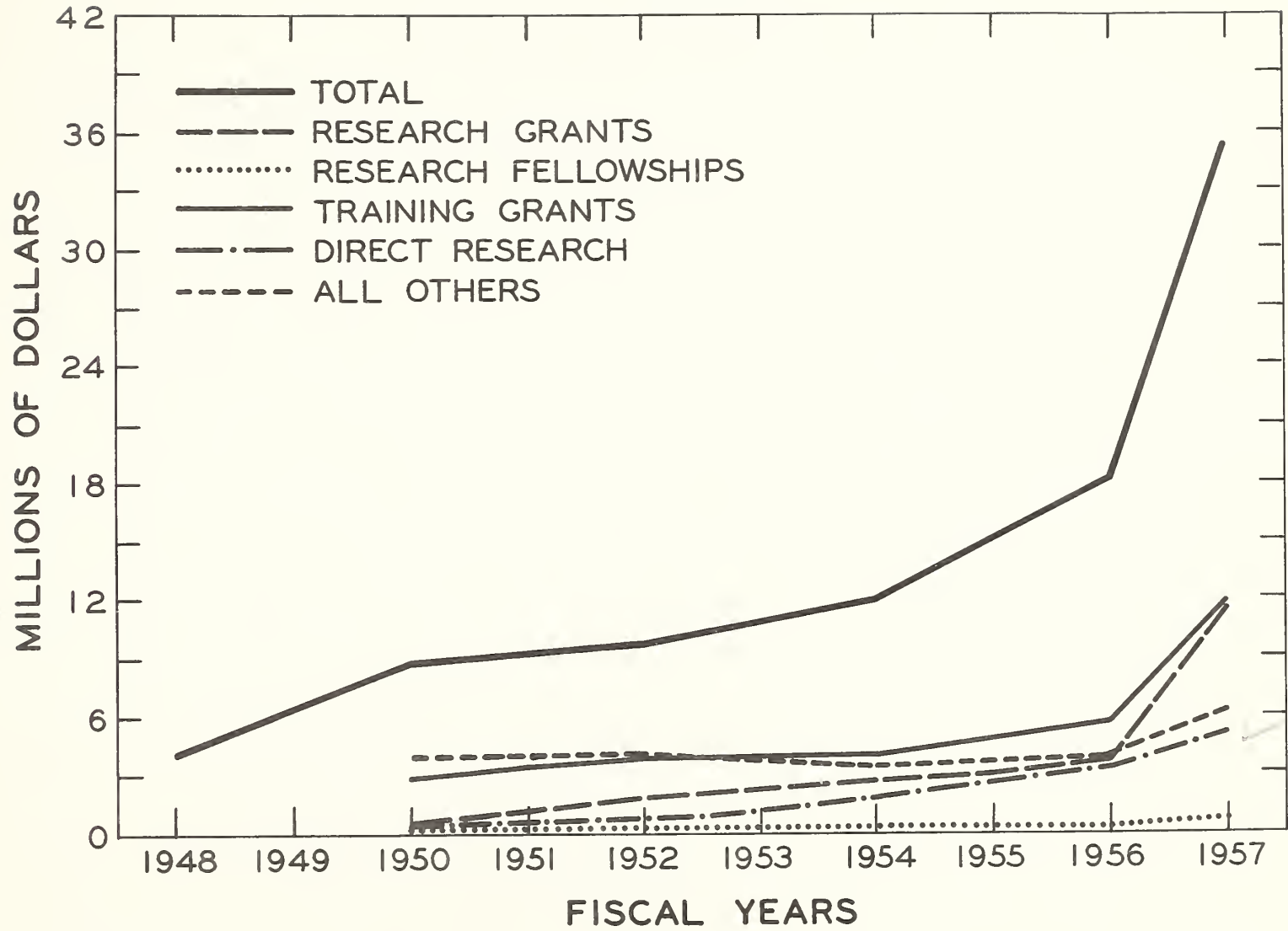


NATIONAL INSTITUTE OF MENTAL HEALTH

The activity line designated "all others" on this chart includes Administration, Review and Approval of Grants, Grants to States, and Technical Assistance to States.

The downward trend reflected on the "all others" line was due primarily to a reduction in Grants to States in the period 1952-1954.

NIMH

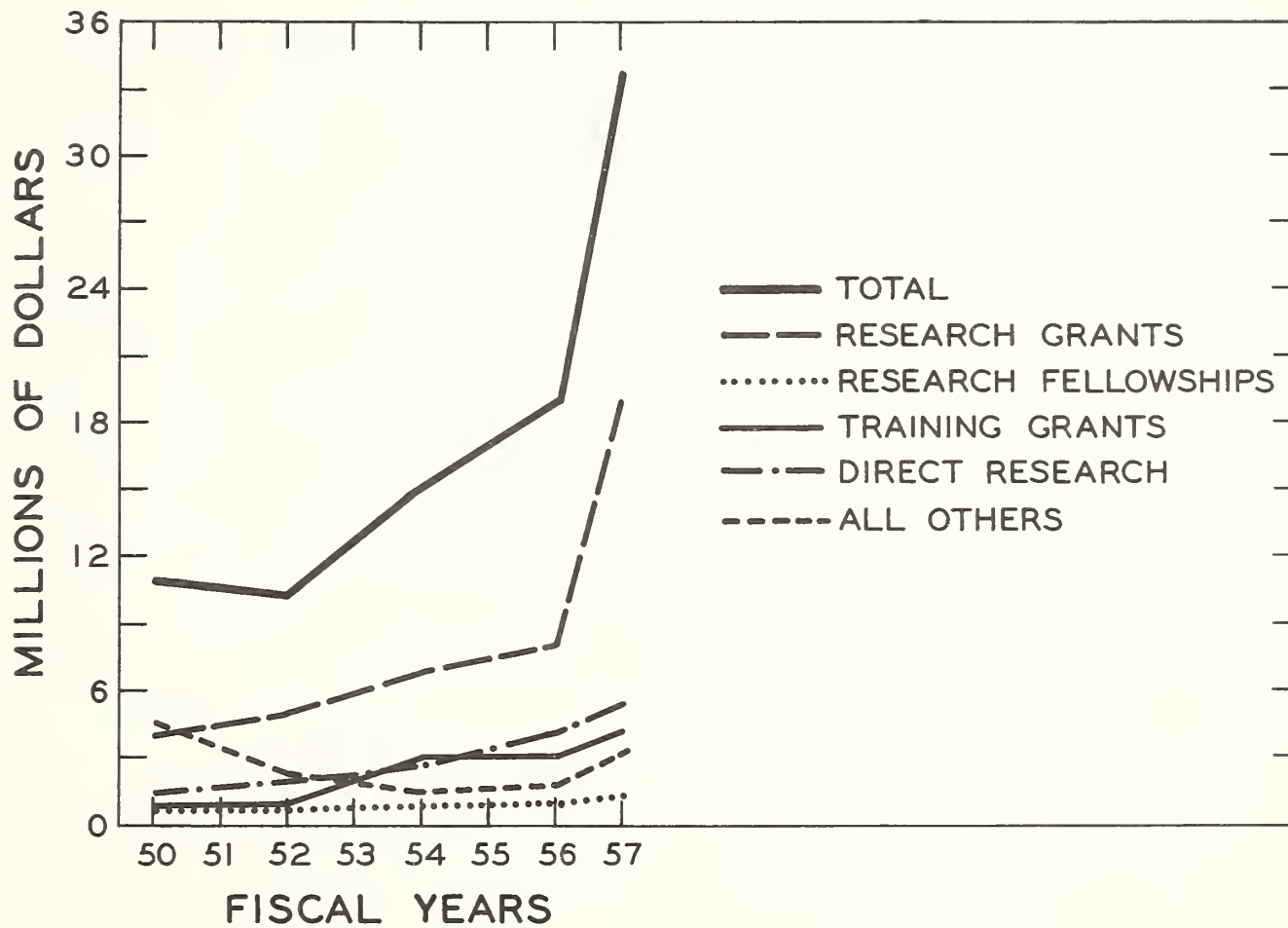


NATIONAL HEART INSTITUTE

The "all others" activity line on this chart includes Administration, Review and Approval of Grants, Technical Assistance to States, and Grants to States. The

downward trend in these activities beginning in 1950 was due to termination of the Construction Grants program and a reduction in Grants to States.

NHI

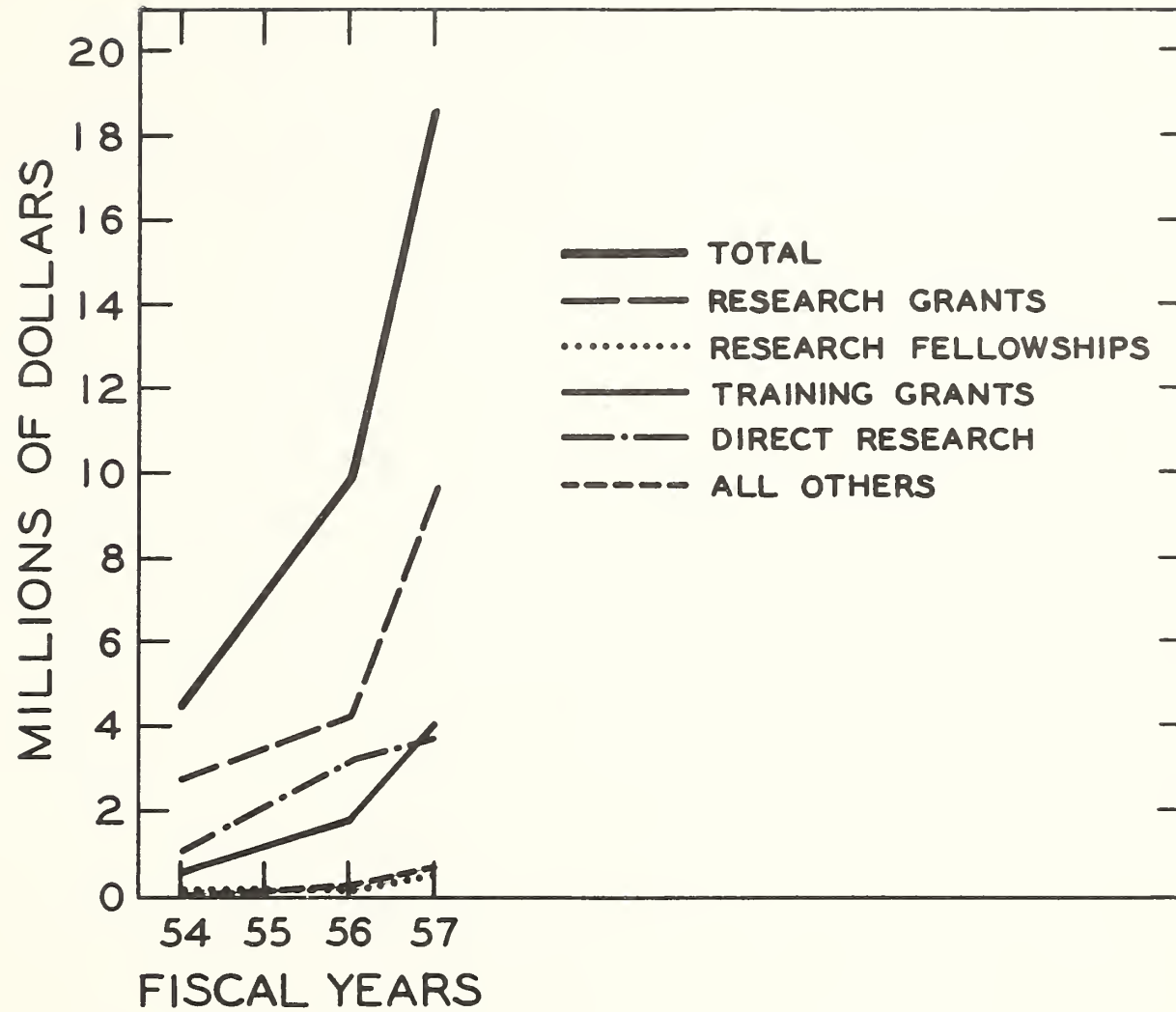


NATIONAL INSTITUTE OF NEUROLOGICAL DISEASES AND BLINDNESS

Prior to fiscal year 1954, the National Institute of Neurological Diseases and Blindness was supported under the general appropriation "Operating Expenses, National Institutes of Health" (see GR & S Chart). This particular chart, therefore, reflects only those

years for which this Institute has had a separate appropriation. The activity line charted as "all others" includes Administration, and Review and Approval of Grants.

NINDB

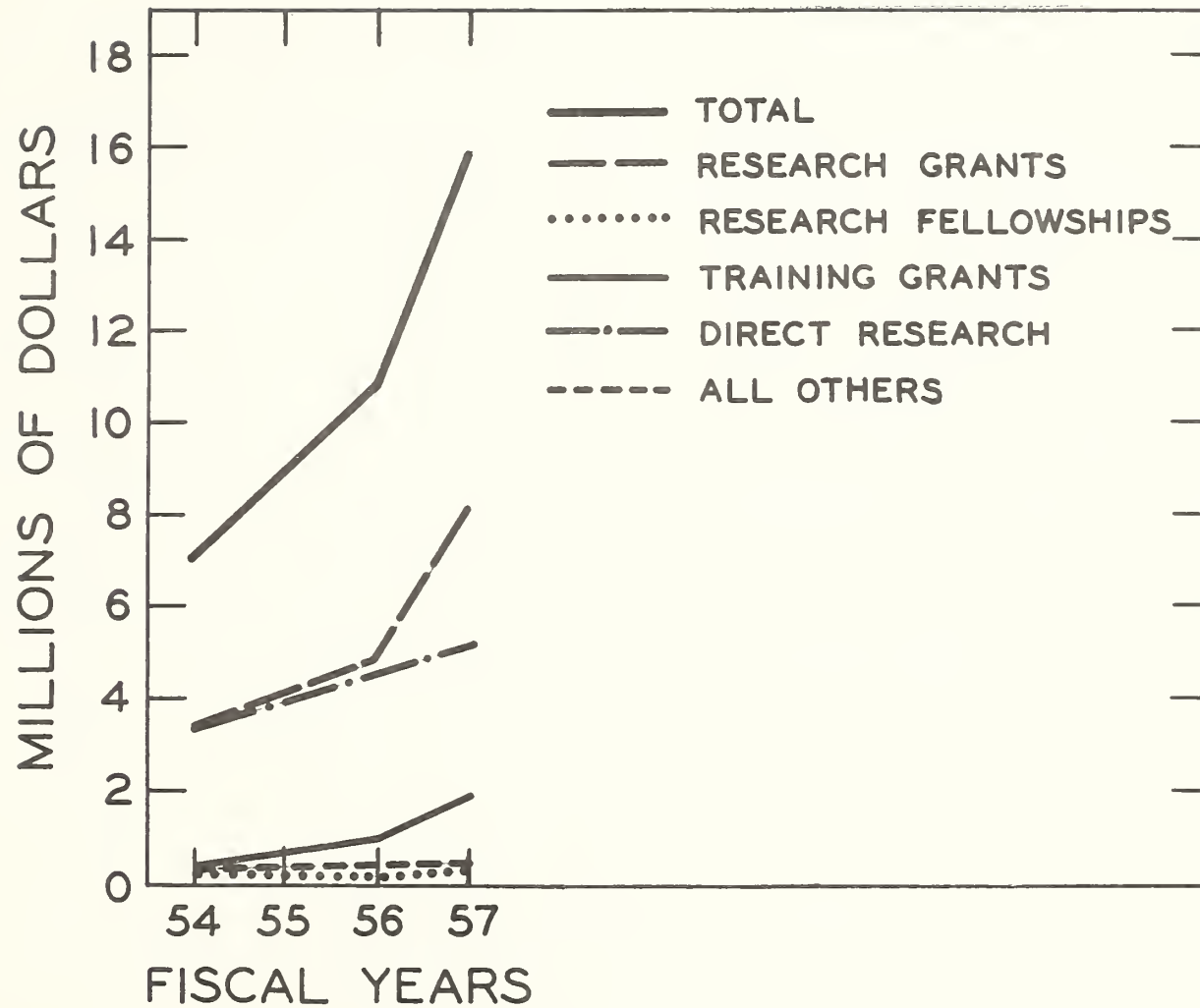


NATIONAL INSTITUTE OF ARTHRITIS AND METABOLIC DISEASES

Prior to fiscal year 1954, the National Institute of Arthritis and Metabolic Diseases was supported within the general appropriation "Operating Expenses, National Institutes of Health" (see GR & S Chart). This particu-

lar chart, therefore, reflects only those years for which this Institute has had a separate appropriation. The activity line charted as "all others" includes Administration, and Review and Approval of Grants.

NIAMD

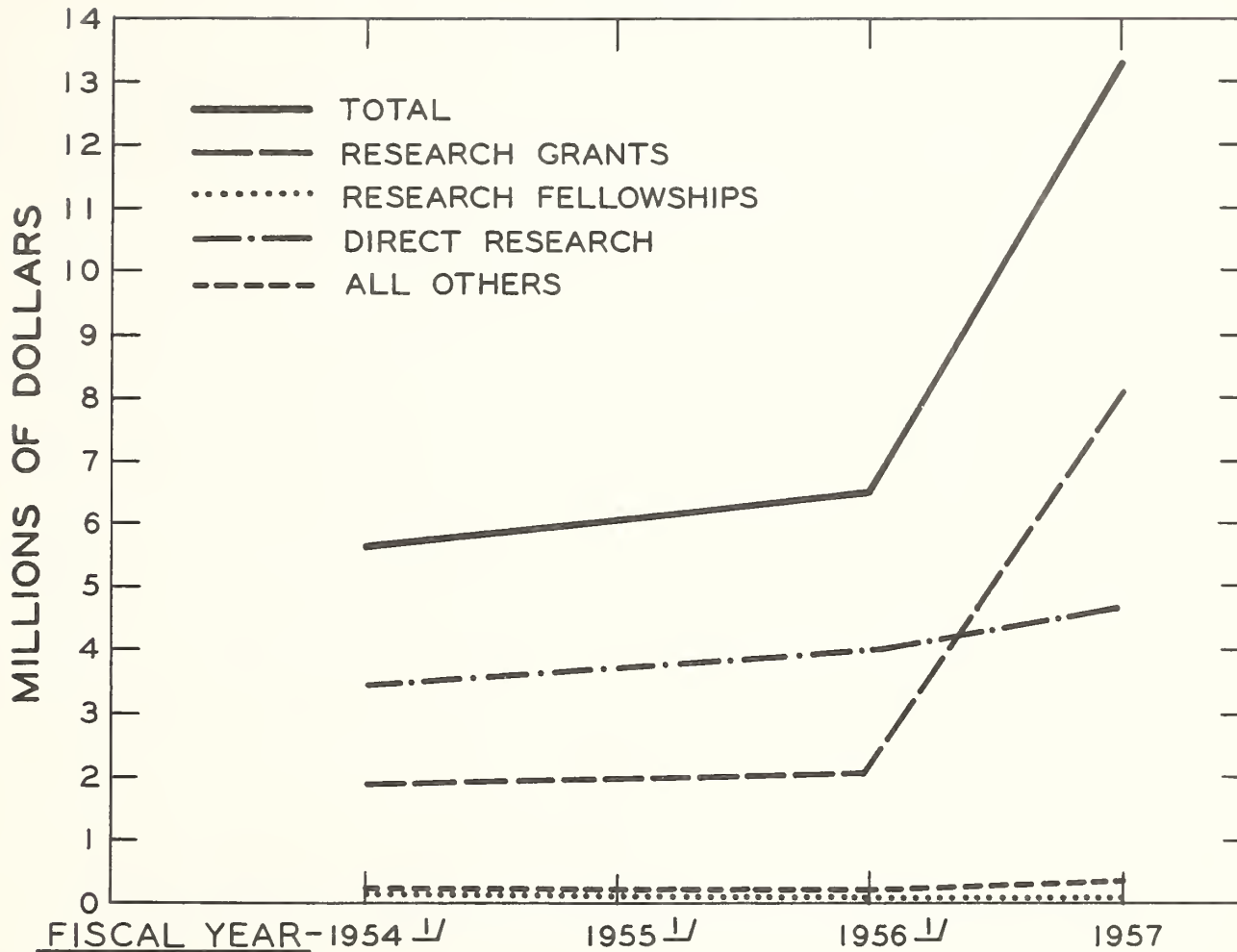


NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

Prior to fiscal year 1954, the National Institute of Allergy and Infectious Diseases was supported within the general appropriation "Operating Expenses, National Institutes of Health" (see GR & S Chart). This partic-

ular chart, therefore, reflects only those years for which this Institute has had a separate appropriation. The "all others" activity line includes Administration, and Review and Approval of Grants.

NIAID



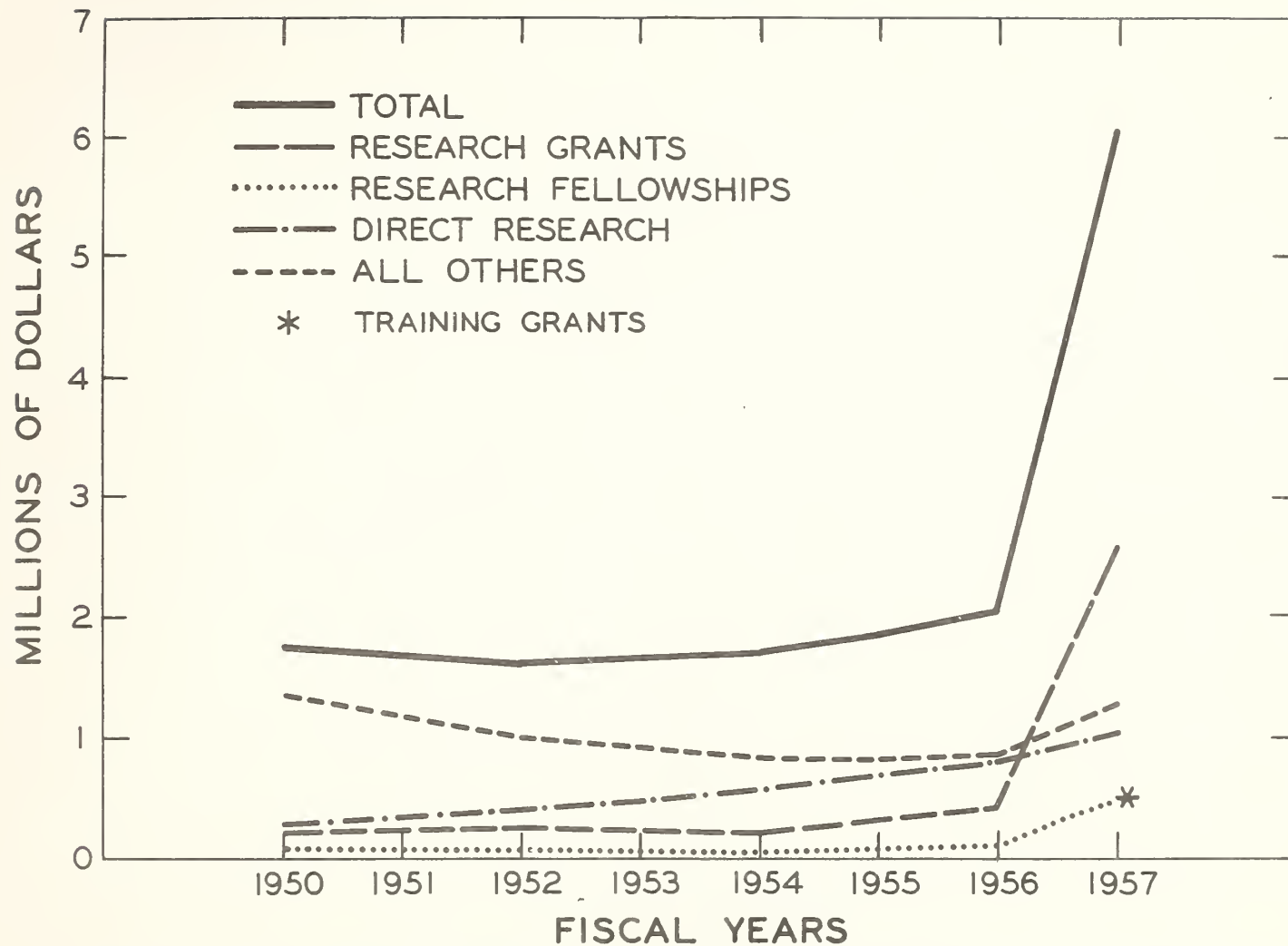
⌋ THIS DIVISION WAS TRANSFERRED TO "GENERAL RESEARCH AND SERVICES" APPROP. IN FISCAL YEAR 1957.

NATIONAL INSTITUTE OF DENTAL RESEARCH

The "all others" activity line on this chart includes Administration, Review and Approval of Grants, Technical Assistance to States, and the Coordination and Development of Dental Resources. The downward trend begin-

ning in 1950 was due to a reduction in funds for Technical Assistance to States. The NIDR program of Training Grants, represented by an asterisk, was initiated in fiscal 1957.

NIDR



* TRAINING GRANTS (\$500,000) - PROGRAM INITIATED FISCAL YEAR 1957.

